Welcome to the Biweekly Restoration Information Update Page. This web site

- Provides current information on wetland and river corridor restoration projects
- Recognizes outstanding restoration projects
- Provides a forum for information sharing

We welcome the submission of articles and announcements related to your restoration project. Just send your write-up to EPA's contractor at restorationupdate@tetratech-ffx.com or mail it to Becky Schmidt, Biweekly Restoration Update Coordinator, Tetra Tech, Inc., 10306 Eaton Place, Suite 340, Fairfax, VA 22030. We will carefully consider your submission for inclusion in a future update. If your submission is selected, please note that it might be edited for length or style before being posted. Because this web site is meant to be a public forum on restoration information, we cannot post any information that is copyrighted or information that serves or has the appearance to serve as advocating or lobbying for any political, business, or commercial purposes.

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- **Feature Article** - Our feature article recognizes outstanding restoration projects or programs.
- **Community-Based Restoration Partnerships** - This section highlights innovative community-based partnerships working to restore wetlands and river corridors.
- **Funding for Restoration Projects** - Here you'll find information pertaining to grants and other funding sources available to local watershed groups and other grassroots community organizations to implement restoration projects.
- **News and Announcements** - This section includes up-to-date information on regulatory issues affecting restoration, conference and workshop announcements, and other newsworthy tidbits.
- **Conferences and Events** - Upcoming wetland restoration related conferences are listed in this section along with other noteworthy wetland events.
- **Restoration-Related Web Sites** - Check out other groups on the Web that are helping in the effort to restore wetlands and river corridors.
- **Information Resources** - Books, journals, fact sheets, videos, and other information resources to aid you in your restoration project are provided here.
- **Ask a Restoration Question** - Post your restoration related question. Answers will be provided by the EPA and Bi-Weekly readers.

Feature Article

Decatur Works for Habitat Restoration
Corporations owning large amounts of land have a great opportunity to positively impact wildlife habitat. Often, only a portion of the land is developed, and the remaining undeveloped portion of land has the potential to be used for wildlife habitat. BP Amoco has taken advantage of the undeveloped land on the Decatur Works facility in Decatur, Alabama, and converted the unused land into a wildlife habitat area and a community education facility.
In the early 1990s BP Amoco realized the 530-acre plot of unused, undisturbed land could be used to benefit both wildlife and the Decatur community. In an early partnership with the Wildlife Habitat Council, Decatur Works restored native plants and shrubs to the area. To encourage wildlife to inhabit a low-lying marsh, volunteers built nest boxes and placed them in the marsh. The partnership also constructed a 1.3-mile nature trail near a 10-acre wooded wetland to make it possible for Decatur residents to enjoy this valuable habitat area.
In 1999 BP Amoco received a $10,000 grant through the Five-Star Restoration Program, to which they contributed an additional $19,000. BP Amoco used the funds to enhance the 10-acre

wetland and build an environmental education center for the City of Decatur school system. BP Amoco worked with Johnson, Bates, and Legg Civil Contractors and the Natural Resources Conservation Service, Flint Creek Watershed Project, Tennessee Valley Authority, and Morgan County Soil and Water Conservation District to expand the wetland by 25 percent. In addition, BP Amoco worked with Decatur Youth Services, Alabama Department of Corrections-Work Release, and a Decatur Boy Scout troop to replace invasive plant species with native plants. The project partners expanded the nature trail system to allow local residents to enjoy the newly expanded wetland area.

To complete the final portion of the community education project, BPAmoco built the Wetlands Edge Environmental Center. The two full-time staff at the center, employed by the City of Decatur School system, are currently working to complete educational exhibits at the center and to further restore the surrounding wetland areas. In an effort to increase the educational value of the Wetlands Edge Environmental Center, staff are working to establish a permanent water supply to the marsh and wooded bottomland wetland areas so students can visit them all year. The staff are also working to improve the marsh with additional plantings of riparian vegetation. BP Amoco has assisted in this effort by digging a well near the wooded bottomland wetland area to serve as a year-round water source. If all the work is completed on schedule, the environmental center will open in January 2002 to students. Students will be able to enjoy half-day interactive field trips where they will learn about wetland stewardship. For more information on the BP Amoco restoration project, visit http://www.ipieca.org/downloads/CBD/BPAmocoAlabama.pdf (PDF) or call Bob Johnson at (301) 588-8994. For more information on the Wetlands Edge Environmental Center, visit their web site at http://www.weec.dcs.edu/1WEEChome.htm or call (256) 301-1559.

If you'd like your project to appear as our next Featured Article, e-mail a short description to restorationupdate@tetratech-ffx.com.

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Community-Based Restoration Partnerships

Students from Rural and Urban New York Working Together to Restore a Stream

This past spring, approximately 60 students from New York City's High School for Environmental Studies joined students from Margaretville Central School and South Kortright Central School, located in upstate New York, to work on a stream restoration project on the East Kill Creek in Greene County. The students helped Greene County Soil and Water Conservation District (GCSWCD) staff plant live willow posts and tree seedlings on a 2500-foot long restored area near Beaches Corners in the town of Jewett, New York. The East Kill Creek originates in the town of Jewett and flows into the Schoharie Creek about 10 miles above the Schoharie Reservoir. The Schoharie Reservoir provides some of the drinking water for New York City. By working together, the students from the East Kill watershed can help protect their local environment while the students from the City can learn about and help protect their drinking water supply.

"We are excited about working with upstate students on a cooperative project in the New York City watershed," said Michael Zamm, Director of Education at the Council on the Environment of New York City. The Council is a privately funded citizens' organization in the Office of the Mayor. The students from the city are involved in the Council's Water Conservation/Watershed Education Program, which received funding for this upstate-downstate educational project from the Catskill Watershed Corporation's Public Education Grants Program. This project brings upstate and city students together to work on the watershed about two times each year. For more information see http://www.ci.nyc.ny.us/html/dep/html/press/01-10pr.html or contact Geoffrey Ryan with the New York City's Department of Environmental Protection at (718) 595-6600 or Rene Van Schaack with the GCSWCD at (518) 622-3620/rene@gcswcd.com.

The Long-Awaited Return of Black Rush Lake

After more than 100 years of agricultural use, the bed of what once was Black Rush Lake outside Marshall, Minnesota, still exhibited some wetland characteristics: it flooded frequently, and it was not uncommon to find bulrushes growing in low-lying areas. In the mid-1990s, the family that farmed and owned the land considered installing a drainage system to increase the agricultural

production of the land. Instead, the landowners opted to sell the land to the U.S. Fish and Wildlife Service, which bought the land with funds from the sale of Federal Duck Stamps.
Partners from the following 14 agencies worked together to recreate Black Rush Lake:

- Minnesota River Basin Projects, Inc.
- Balaton Sportsmen's Club
- Minnesota Board of Soil and Water Resources
- Cottonwood Sportsmen's Club
- Ducks Unlimited, Inc.
- Lyon County Commissioners
- Lyon County Highway Department
- Lyon County Soil and Water Conservation Department
- Minnesota Division of Trails and Waterways
- Minnesota Division of Wildlife
- Pheasants Forever, Inc.
- Redwood River Sportsmen's Club
- Southwest Sportsmen's Club and
- U.S. Fish and Wildlife Service

The project partners contributed more than $290,000 to the $50,000 they received in North American Wetlands Conservation Act (http://northamerican.fws.gov/NAWCA/grants.htm) grant funds to make the restoration project a success.
The lake has been restored to its former state through the use of water control structures to maintain the water level of the lake at a depth of between 2 and 3 feet. The lake contains a mix of open water habitat and emergent vegetation—perfect conditions for a waterfowl production area. Migratory waterfowl and resident wildlife have returned to inhabit the lake. In addition, the lake and its resident wildlife provide recreational activities to nearby residents in the form of wildlife photography, bird watching, and hunting. The surrounding farmland areas also benefit from the flood storage capacity of the lake. For more information, contact Steven Kallin, Wetland Manager, U.S. Fish and Wildlife Service, Black Rush Lake Waterfowl Production Area, Route 1, Box 273 A, Windom, Minnesota 56101, (800) 577-2875 ext 11 or e-mail steve_kallin@fws.gov.
If you are part of an innovative community-based partnership that is working to restore river corridors or wetlands, we'd like to hear from you. Please send a short description of your partnership to restorationupdate@tetratech-ffx.com.

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Achieving Restoration Results

Evolving Ideas About Riparian Vegetation Lead to Big Changes in Trout Creek
As early as 1940 ranchers in Colorado spent large amounts of time and money removing willows and alders along streambanks. The removal of streamside vegetation resulted in erosion and water quality degradation. Since the 1940s attitudes toward riparian vegetation have dramatically changed. In 1998 Colorado rancher Brent Romick decided to repair past damage and restore vegetation along 3 miles of Trout Creek. Romick assembled a team that included representatives from River Fisheries Consultants, Water Way Restorations, Inc., Natural Resources Conservation Service, Colorado Division of Wildlife, Rocky Mountain Native Plants, and the U.S. Fish and Wildlife Service.
The restoration was planned in three phases. Phase 1 included regrading the streambank and planting vegetation. Three- to four-foot vertical eroded banks were graded to a 3-to-1 grade and alders and willows were planted in the riverbank using a track hoe. Four-foot by eight-foot plant mats were harvested from adjacent point bars and planted on the graded riverbend areas.

Phase 2 consisted of grading and reseeding all disturbed areas, including plant mat harvest areas and other areas disturbed by the use of heavy machinery. The Colorado Division of Wildlife provided a mix of native seeds, including tall wheatgrass, bluebunch wheatgrass, cicer milkvetch, orchardgrass, wyeth buckwheat, Lewis blue flax, alfalfa, and big bluegrass. After the areas were seeded, the seed was raked in and mulched.
Small nursery-raised alders and willows were planted along the 3-mile restored area of Trout Creek to complete phase 3. A restoration team planted the trees, which ranged from container sizes of 1 quart to 1 gallon.
The entire restoration effort was highly successful. Survival rates of vegetation in the transplanted vegetation mats was greater than 95 percent. Reseeding of the vegetation mat harvest sites met with varied success. Reseeding and mulching of the disturbed areas will continue until the vegetation is reestablished. Only a year after planting, the nursery-raised willow and alder trees were already nicely established. For more information, visit http://www.coloradoriparian.org/GreenLine/V12-2/CreekRanch.html.

New Yorkers Join Together to Restore Batavia Kill

On November 10 and 11, the Greene County Soil and Water Conservation District (GCSWCD), the New York City Department of Environmental Protection (DEP), local chapters of Trout Unlimited, students from local schools, and other local volunteers took part in a cooperative stream restoration planting effort on the Batavia Kill creek in the town of Windham. This effort is part of a much larger Batavia Kill restoration project funded partly by the New York State Department of Environmental Protection and partly by the New York DEP. Participants assembled willow bundles, called fascines, and planted live willow posts and tree seedlings on 1 mile of restored stream at Big Hollow, in the headwaters of the Batavia Kill. The Batavia Kill flows from the Blackhead Mountains through Windham, Ashland, and Prattsville into the Schoharie Reservoir, a source of drinking water for New York City.
"A mile-long stream reach at Big Hollow was badly damaged by the flood of 1996," said DEP Commissioner Joel A. Miele, Sr., P.E. "Severely eroding stream banks contributed significant amounts of sediment, or turbidity, to downstream flows, seriously affecting water quality and trout habitat. Using the principles of natural channel design, GCSWCD, in collaboration with DEP, has adjusted stream width and depth into a more stable form. Numerous stability structures have been added to alleviate pressure on the banks and to restore and maintain the pools and riffles that create stream depths and flows necessary to provide suitable fish habitat."
Volunteers harvested native species of willows and transplanted them on the project site to help stabilize it. They also planted tree seedlings provided by the State Tree Nursery in Saratoga. Rene Van Schaack, GCSWCD Executive Director, explained, "This type of planting or 'bioengineering' relies on roots of woody plants to anchor soil and to provide additional bank stability."
The new vegetation serves another purpose as well. "Vegetated stream banks provide shade that is critical to fish during low-flow months," said Nat Gillespie, Catskills Coordinator of Trout Unlimited. "We are pleased to take part in this stream restoration effort in the Catskills, and expect to see local fish populations respond to improved riparian habitat and a more stable stream channel." Additional information on this and other restoration projects can be found on the GCSWCD web site at http://www.gcswcd.com/stream/. For more information contact Geoffrey Ryan at the DEP at (718) 595-6600 or Rene Van Schaack at the GCSWCD at (518) 622-3620/rene@gcswcd.com.
If you are part of an innovative restoration project that has had positive results, we'd like to hear from you. Please send a short description of your project to restorationupdate@tetratech-ffx.com.

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Funding for Restoration Projects

New Listings:

Nebraska's Wetland Initiative Program

The Private Lands Wetland Initiative Program helps reimburse landowners in Nebraska who protect, restore, enhance, or create shallow water wetlands. The program pays a landowner's

cost to restore, enhance, or create a shallow water wetland area. Nebraska landowners are reimbursed for 100 percent of the development costs for approved projects. Landowners wanting to participate in the program sign an agreement with the Game and Parks Commission to protect the wetlands for no less than 10 years. For more information contact the Game and Parks Commission's central offices at Nebraska Game and Parks Commission, P.O. Box 30370, Lincoln, NE 68503-0370. Phone (402) 471-0641. Internet: http://ngp.ngpc.state.ne.us/gp.html.

River Restoration Grant Proposals Now Being Accepted

American Rivers is seeking proposals for community-based river restoration grants as part of its new partnership with the National Oceanic and Atmospheric Administration (NOAA) Community-Based Restoration Program. These grants are designed to provide support for local communities that are using dam removal or fish passage construction to restore and protect the ecological integrity of their rivers and improve freshwater habitats important to migratory (anadromous) fish. Grants will be limited to projects in the Northeast, Mid-Atlantic, and California. For more information visit http://www.amrivers.org/feature/restorationgrants.htm or e-mail rivergrants@amrivers.org.

Previous Listings:

NAWCA Small Grant

The U.S. Fish and Wildlife Service's Division of Bird Habitat Conservation in Washington state is accepting North American Wetlands Conservation Act small grant applications through November 30. These grants are for requests of up to $50,000 to benefit wetland habitats and migratory birds. Partnerships and non-federal matches are required. All information and application materials for this program are available at http://birdhabitat.fws.gov/.

Please send any news you have on funding mechanisms available to local community organizations to restorationupdate@tetratech-ffx.com.

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News and Announcements

The North American Waterbird Conservation Initiative

The mission of the North American Waterbird Conservation Initiative (NAWCI) is to create a cohesive, multinational partnership for conserving and managing waterbirds and their habitats throughout North America. The second draft of the North American Waterbird Conservation Plan–Colonial Waterbirds is available for review and comment. It can be accessed at http://www.nawcp.org. Comments are due by December 31, 2001 and should be sent to WaterbirdComments@usgs.gov.

A working group is being assembled to prepare a continent-wide conservation plan, which will constitute the second volume of the North American Waterbird Plan. Ornithologists and conservationists interested in participating in the development of the continental plan for marshbirds should contact Jim Kushlan by e-mail at Jkushlan@aol.com.

Regional and national planning is also under way. Ornithologists and conservationists interested in participating in the Regional Waterbird Planning effort should contact Jennifer Wheeler at Jennifer_A_Wheeler@fws.gov. For more information on the North American Bird Conservation Plan, visit their web site at http://www.nawcp.org/.

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Conferences and Events

World Wetlands Day
February 2, 2002

This day celebrates the signing of the Convention on Wetlands on February 2, 1971, in the Iranian city of Ramsar on the shores of the Caspian Sea. Celebrated since 1997, World Wetlands Days have been organized around themes that stress the importance of water and wetlands to life. This year's theme is "Wetlands: Water, Life, and Culture." For more information on past

World Wetlands Days and materials available for the upcoming World Wetlands Day, visit http://www.ramsar.org/wwd2002_index.htm.

Watershed 2002
February 23-27, 2002
Fort Lauderdale, Florida

The Water Environment Federation and the Florida Water Environment Association are sponsoring this international specialty conference. The conference will explore the challenges of managing the world's watersheds while highlighting the unique issues of the Conference's host region, the southeastern United States. Every 2 years, this conference brings together environmental professionals for a showcase on integrated resource management and environmental protection principles using watershed-based approaches. Abstract Deadline: April 26, 2001. Please mail your Abstract and Abstract Submittal Form to Technical Programs - Watershed 2002 Abstracts, Water Environment Federation, 601 Wythe Street, Alexandria, VA 22314-1994. Phone: (703) 684-2442. Fax: (703) 684-2413.

Native Plant Propagation and Restoration Strategies
December 12-13, 2001
Eugene, Oregon

This 2-day conference is sponsored by the Nursery Technology Cooperative. Speakers will discuss issues such as techniques and considerations for native seeds, native plant restoration, invasive species control, and watershed revegetation. More information, including registration procedures, can be found at http://www.cof.orst.edu/coops/ntc/conf.htm.

To post your restoration news and announcements, please send information to restorationupdate@tetratech-ffx.com.

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Restoration-Related Web Sites

http://www.gcswcd.com/stream/

The Green County Soil and Water Conservation District in New York maintains a stream restoration web page detailing the numerous projects they are undertaking. The site offers maps, photos, and other details. This site provides useful stream restoration-related resources and a list of training courses.

http://www.sio.ucsd.edu/research_overview/index.html

The Scripps Institution of Oceanography supports more than 300 active research projects, many of which are directly related to wetlands. This site provides short summaries of the major research projects currently under way. This site would be useful for anyone looking for current and ongoing coastal restoration-related research studies.

http://cimic3.rutgers.edu/meri/

Meadowlands Environmental Research Institute (MERI) conducts and sponsors research in ecology, environmental science, and information technology that might benefit estuarine systems in northeastern New Jersey. Digital Meadowlands, an on-line information system that contains interactive maps, satellite images, field data, and an environmental reports catalog, is accessible through this site, as well as a list of current and past research sponsored by MERI. This site would be useful to anyone looking for technical resources for estuarine restoration.

http://www.nature.nps.gov/wrd/

The mission of the National Parks Service, Water Resources Division, is to preserve and protect National Park Service water resources and water-dependent environments. This mission is accomplished through a watershed management program based on needs at the park, cluster, region, and national levels. This web site also describes the efforts the National Park Service is taking to protect and restore wetlands on its land. This site would be useful for anyone wishing to know more about what the National Park Service is doing to protect water resources and wetlands.

http://www.abi.org/

NatureServe is a nonprofit organization dedicated to providing knowledge to protect our natural world. Working in partnership with The Nature Conservancy and a network of scientific experts, NatureServe helps protect the environment by improving public understanding of biodiversity and by developing essential information about rare and endangered plants and animals and threatened ecosystems. This site would be useful for anyone looking for information on conservation, biodiversity, or rare and endangered species.

http://www3.csc.noaa.gov/CSCweb/genericPage.asp?bin=8

NOAA Coastal Services Center Habitat Characterizations provides studies and research done in the areas of benthic mapping, environmental characterizations, land cover analysis, habitat restorations, and harmful algal blooms. This site provides useful information on assessing the relative importance of wetlands within a watershed, mapping submerged aquatic vegetation, and land cover mapping.

http://www.ncnerr.org/cerf/index.html

Carolina Estuary Reserve Foundation promotes state acquisition and protection of a diverse system of coastal natural areas to advance research, education, and partnerships. This site provides information about estuaries, the research being done by the Carolina Estuary Reserve Foundation, educational opportunities at the reserve, and efforts to protect estuaries.

http://www.estuarylive.org/

Estuary Live provides virtual field resources, including an electronic field trip, live video pages, and links pages for elementary, middle, high school, or college students. The web site also provides links to estuary related reference materials and lesson plans. This web site would be useful for teachers who wish to provide an interactive estuary experience to their students.

http://www.wetlands.com/

The Wetlands Regulation Center is presented by Environmental Technical Services Co. as a service to all persons interested in the laws, policies, and regulations concerning activities regulated under Sections 401 and 404 of the Clean Water Act in waters of the United States, including wetlands. This site would be useful for anyone looking for current national wetland regulations.

http://www.norwalkriver.org/

Norwalk River Watershed Association, Inc. This association is dedicated to protecting the Norwalk River watershed, located in southwestern Connecticut and southeastern New York. The association continues to protect the watershed and remove invasive species along the riverbank. This site gives a good example of how a community organization can mobilize people to protect their watershed.

http://www.greensheets.org/

Congressional Green Sheets, Inc., is a publishing company that provides objective analysis of environmental, energy, and natural resources issues before the U.S. Congress. The web site provides a searchable on-line database that will help you find out about current legislation affecting all aspects of the environment, including wetlands and river corridor restoration. This site would be useful for anyone who wishes to learn about and follow wetlands and river corridor legislation in Congress.

http://www.up-north.com/mnwaterfowl/index.html

Minnesota Waterfowl Association is a nonprofit organization that preserves, restores, develops, enhances, and protects Minnesota's wetlands and associated uplands through public education, legislative initiatives, and projects to benefit waterfowl, wildlife, and the environment. This site would be useful for anyone wishing to get involved in wetland restoration in Minnesota, or as an example of what a community can accomplish if it works together.

Let us know about your restoration-related web site. Please send relevant URLs to restorationupdate@tetratech-ffx.com.

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Information Resources

Guidebook for Hydrogeomorphic-based Assessment of Oregon Wetland and Riparian Sites. I. Willamette Valley Ecoregion, Riverine Impounding and Slope/Flats Subclasses.
Oregon Division of State Lands, 2001

Volume IA: Assessment Methods. This guidebook presents rapid methods for assessing wetland functions and values, based on reference data collected at 109 wetland and riparian sites. Useful for prioritizing sites, evaluating impacts, and assessing restoration in this region, the 140-page guidebook comes with a CD containing maps of land cover and presettlement vegetation, regional bibliography with 1500+ references, full data set, and files containing the other two volumes (see below). The cost for the guidebook is $8.00.

Volume IB: Technical Report. This guidebook describes the selection of reference sites, use of wetland plant data to represent wetland ecological condition, and development of function performance standards for restored sites. It can be ordered for $4.00.

Statewide Classification and Profiles. This guidebook defines and profiles 14 wetland/riparian subclasses in each of 10 regions of Oregon, describing their distribution, variability, functions, and vulnerability. It also provides a framework for future development of function assessment tools for statewide application. The 161-page guidebook can be purchased for $8.00.

Mail requests for the guidebooks to Dana Field, Wetlands Program, Oregon Division of State Lands, 775 Summer St., NE, Salem, OR 97301-1279. Make checks payable to "Oregon Division of State Lands."

Texas Coastal Wetlands Guidebook

A Texas Sea Grant Publication, 2000

This 65-page, full-color publication gives information on the seven major types of wetlands in Texas. Information on each wetland type includes typical location, geology and soils, hydrology, vegetation, wildlife, and threats. It also provides a listing of wetland sites throughout Texas that are open for visitation. To request a copy of this guidebook, write the Texas Sea Grant College Program, 1716 Briarcrest, Suite 603, Bryan, TX 77802 or visit http://texas-sea-grant.tamu.edu/.

Purple Loosestrife Awareness in Nebraska

Brochure by Rainwater Basin/Joint Venture

This brochure provides nontechnical information on the common problems created by the growth of the invasive plant purple loosestrife. It also contains information on identifying the plant and methods of control. To view the brochure, visit http://www.ngpc.state.ne.us/wildlife/rwbjv/Purlse.HTML.

Shorebirds

By Des Thompson and Ingvar Byrkjedal, 2001

This book takes a look at the birds that make their homes along the world's shores. There are 214 species of shorebirds worldwide. This book concentrates on the species common to North America and Europe, which include plovers, sandpipers, jacanas, snipe, lapwings, oystercatchers, curlew, coursers, dowitchers, surfbirds, and thick-knees. Shorebirds is one of the latest volumes in the WorldLife Library series, an expanding series of books that draws on the knowledge, personal experiences, and research of the world's leading naturalists. WorldLife Library books are appropriate for ages 10 and above. It can be ordered from Voyageur Press at http://www.voyageurpress.com/. Phone: (800) 888-9653. Fax: (651) 430-2211.

If you'd like to publicize the availability of relevant information resources, please send information to restorationupdate@tetratech-ffx.com